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Arrhythmias

ALLOPURINOL DECREASES THE INCIDENCE OF ATRIAL FIBRILLATION IN HEART FAILURE PATIENTS

Poster Contributions
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Background: Serum uric acid (SUA) is an independent marker of mortality and predictor of atrial fibrillation (AF) in patients with heart failure (HF). The primary aim of this study was to evaluate the effect of allopurinol on the incidence of AF in a Veteran population with HF.

Methods: The study is a retrospective cohort that included Veterans enrolled in the Bruce Carter Miami VA HF clinic between the dates of January 2005 to January 2011. We defined HF as being enrolled in the HF clinic and having an ejection fraction (EF) ≤ 40%. AF was defined as being hospitalized for AF or seen in clinic visit for AF. We used logistic regression to calculate the propensity of using allopurinol and then conducted a propensity matched analysis as well as multivariate cox proportional models adjusted for the propensity score and left atrial size.

Results: We identified 603 Veterans with heart failure divided into 103 allopurinol users that were matched with 500 non-allopurinol users. The two matched groups were similar in baseline characteristics that included demographics, cardiovascular risk factors, HF medication use, creatinine and left atria size ($p>0.05$). The incidence of AF was lower in the allopurinol group when compared to the non-allopurinol users (figure). There was a 13% lower difference in the incidence of AF in matched allopurinol users. The hazard ratio of having AF for allopurinol users was 0.5; 95% CI 0.2-0.9; $p=0.04$ adjusted for the propensity of using allopurinol and left atrial size.

Conclusion: The use of allopurinol can potentially reduce the incidence of AF in heart failure patients. The effects could be mediated by changes in oxidative stress. This finding has to be validated in randomized trials.